

REMARKS

Claims 1-16, 18, and 20-22 are pending in the application. Claims 1-11 are withdrawn from consideration as being directed to a non-elected invention. In the final Office Action of June 22, 2007, the Examiner made the following disposition:

- A.) Rejected claims 16 and 20 under 35 U.S.C. 102(a) as being anticipated by *Tanaka* (JP-2002110953).
- B.) Rejected claims 12, 13, and 21 under 35 U.S.C. 103(a) as being anticipated by *Inoue, et al.* (U.S. 6,211,509) in view of *Ogawa* (U.S. 6,104,021).
- C.) Rejected claims 14, 15, and 22 under 35 U.S.C. §103(a) as being unpatentable over *Inoue* in view of *Ogawa* and *Matsuda, et al.* (JP11-40787).
- D.) Rejected claim 18 under 35 U.S.C. §103(a) as being unpatentable over *Tanaka* in view of *Yamaguchi, et al.* (US 6,344,666).

Applicant addresses the Examiner's disposition below.

- A.) Rejection of claims 16 and 20 under 35 U.S.C. 102(a) as being anticipated by *Tanaka* (JP-2002110953):

Applicant respectfully disagrees with the rejection.

Claim 16 has been amended to clarify the claim language.

Referring to Figure 3 as an illustrative example, independent claim 16, as amended, claims subject matter relating to a single intra-layer lens 23 that is formed corresponding to a light-receiving portion 2. A first uppermost wiring portion 7 is positioned at a first side of the light-receiving portion 2 and a second uppermost wiring portion 8 is positioned at an opposite side of the light-receiving portion 2. The first and second uppermost wiring portions are asymmetrically disposed with respect to said light-receiving portion 2 (in the illustrative example, wiring 8 is closer to the light-receiving portion 2 than wiring 7). The intra-layer lens 23 is formed without being affected by the asymmetrical wirings 7 and 8.

This is clearly unlike *Tanaka*, which fails to disclose or suggest first and second uppermost wiring portions positioned at opposite sides of a light-receiving portion that are asymmetrically disposed with respect to the light-receiving portion. Referring to *Tanaka* Figure 1, *Tanaka* teaches uppermost layer wirings 106 and 107 positioned at opposite sides of a light-receiving portion 102 that are clearly symmetrically disposed with respect to the light-receiving portion 102. In other words, *Tanaka*'s wirings 106 and 107 are symmetrically positioned and at an equal distance from each side of light-receiving portion 102. Unlike Applicant's claimed

invention, nowhere does *Tanaka* disclose or suggest uppermost wirings positioned at opposite sides of a light-receiving portion that are asymmetrically disposed with respect to the light-receiving portion.

For at least this reason, *Tanaka* fails to disclose or suggest claim 16.

Claim 20 depends directly or indirectly from claim 16 and is therefore allowable for at least the same reasons that claim 16 is allowable.

Applicant respectfully submits the rejection has been overcome and requests that it be withdrawn.

B.) Rejection of claims 12, 13, and 21 under 35 U.S.C. 103(a) as being anticipated by *Inoue, et al.* (U.S. 6,211,509) in view of *Ogawa* (U.S. 6,104,021):

Applicant respectfully disagrees with the rejection.

Claims 12 and 21 have been amended to clarify the claim language.

Referring to Figure 3 as an illustrative example, independent claims 12 and 21, each as amended, claim subject matter relating to a single intra-layer lens 23 that is formed corresponding to a light-receiving portion 2. A first uppermost wiring 7 is positioned at a first side of the light-receiving portion 2 and a second uppermost wiring 8 is positioned at an opposite side of the light-receiving portion 2. The first and second uppermost wirings are asymmetrically disposed with respect to said light-receiving portion 2 (in the illustrative example, wiring 8 is closer to the light-receiving portion 2 than wiring 7). The first uppermost wiring is not directly coupled to the second uppermost wiring. The intra-layer lens 23 is formed without being affected by the asymmetrical wirings 7 and 8.

This is clearly unlike *Inoue* in view of *Ogawa*, which fails to disclose or suggest first and second uppermost wiring portions positioned at opposite sides of a light-receiving portion that are asymmetrically disposed with respect to the light-receiving portion, wherein the first and second uppermost wirings are not directly coupled. Referring to *Inoue* Figure 4, *Inoue* teaches a common vertical signal line 47 that connects to a diffusion layer 95 of each light-receiving portion 42. As the vertical signal lines are a common signal line, they are clearly coupled to one another. This is clearly unlike Applicant's claimed invention, which claims first and second uppermost wiring portions that are not directly coupled.

Ogawa also fails to teach or suggest first and second uppermost wiring portions that are not directly coupled. For at least this reason, *Inoue* in view of *Ogawa* fails to disclose or suggest claims 12 and 21

Claim 13 depends directly or indirectly from claim 12 and is therefore allowable for at least the same reasons that claim 12 is allowable.

Applicant respectfully submits the rejection has been overcome and requests that it be withdrawn.

C.) Rejection of claims 14, 15, and 22 under 35 U.S.C. §103(a) as being unpatentable over *Inoue* in view of *Ogawa* and *Matsuda*, et al. (JP11-40787):

Applicant respectfully disagrees with the rejection.

Referring to Figure 3 as an illustrative example, independent claims 14 and 22, each as amended, each claim subject matter relating to a single intra-layer lens 3 that is formed corresponding to a light-receiving portion 2. Part of uppermost layer wirings 7 and 8 positioned on both sides of the light-receiving portion 2 are asymmetrically disposed with respect to the light-receiving portion 2 (in the illustrative example, wiring 8 is closer to the light-receiving portion 2 than wiring 7). The intra-layer lens 3 is formed without being affected by the asymmetrical wirings 7 and 8.

This is clearly unlike *Inoue* in view of *Ogawa*, as discussed above. *Matsuda* also fails to disclose or suggest first and second uppermost wiring portions positioned at opposite sides of a light-receiving portion that are asymmetrically disposed with respect to the light-receiving portion, wherein the first and second uppermost wirings are not directly coupled. Therefore, *Inoue* in view of *Ogawa* and *Matsuda* still fails to disclose or suggest claims 14 and 22.

Claim 15 depends directly or indirectly from claim 14 and is therefore allowable for at least the same reasons that claim 14 is allowable.

Applicant respectfully submits the rejection has been overcome and requests that it be withdrawn.

D.) Rejection of claim 18 under 35 U.S.C. §103(a) as being unpatentable over *Tanaka* in view of *Yamaguchi*, et al. (US 6,344,666):

Applicant respectfully disagrees with the rejection.

Claims 16 is allowable over *Tanaka* as discussed above. *Yamaguchi* still fails to disclose or suggest first and second uppermost wiring portions positioned at opposite sides of a light-receiving portion that are asymmetrically disposed with respect to the light-receiving portion. Therefore, *Tanaka* in view of *Yamaguchi* still fails to disclose or suggest claim 16.

Claim 18 depends directly or indirectly from claim 16 and is therefore allowable for at

least the same reasons that claim 16 is allowable.

Applicant respectfully submits the rejection has been overcome and requests that it be withdrawn.

CONCLUSION

In view of the foregoing, it is submitted that claims 12-16, 18, and 20-22 are patentable. It is therefore submitted that the application is in condition for allowance. Notice to that effect is respectfully requested.

Respectfully submitted,

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